

REMARKS

Claims 1-13 are pending in the application.

Claims 1-13 were rejected.

Claims 1, 4, 6, 9, 12 and 13 have been amended.

I. Objections to Specification

The specification was objected to because of an informality – a missing serial number and filing date for a referenced co-pending application. The specification is amended herein to supply the missing information, including the now-issued patent number for the referenced application. Withdrawal of the objection to the specification is accordingly requested.

II. Claim Objections

Claim 13 was objected to because of an informality. The claim has been amended as suggested by the Office Action. Withdrawal of the objection to claim 13 is accordingly requested.

III. 35 U.S.C. §102 Claim Rejections

In the Office Action, claims 1-8 were rejected under 35 USC §102(a) as being anticipated by the prior art described in Applicant's Specification. Applicant respectfully traverses this rejection and requests reconsideration by the Examiner.

The invention is directed to error recovery in a Layer 2 Tunneling Protocol (L2TP) channel, and specifically provides a new process for a sender-initiated data recovery process. As taught by the Applicant, L2TP maintains a sequence variable, Sr, at a receiving peer representing the expected sequence value of the next packet sent from a sending peer. Upon receipt at the receiving peer of a packet having a sequence indicia corresponding to the

expected, or Sr, sequence value, the value of the Sr variable is incremented by 1. It follows, therefore, that the incidence of the received-packet sequence indicia being greater than the expected (Sr) value -- *i.e.*, the case of the correct packet in the sequence not having been received by the receiver (lost packet), will result in the Sr value remaining unchanged.

With L2TP, the current value of the Sr variable is also sent from the receiving peer back to the sending peer in a defined field of a packet being sent from the receiver to the sender. Accordingly, the receipt by the sending peer of an Sr value that does not match the sent-packet sequence provides an indication of a lost packet. This indication is referred to as a negative acknowledgment. According to the invention, a new variable, *multiple-negative-acknowledgments*, is defined and maintained at the sending peer, along with a counter to maintain a count of the number of such negative acknowledgments received. After a predefined number of such negative acknowledgments are received -- *i.e.*, the counter value is equal to that predefined number, a recovery process is initiated by the sending peer.

While, as Applicant described, a sender-initiated recovery algorithm is known in the art for L2TP, that prior-art mythology only operates to initiate a recovery process upon the expiration of a time-out interval, as determined by timing mechanism maintained at the sending peer, prior to receipt of a positive acknowledgment from the receiving peer. Applicant respectfully suggests that this prior-art timing-mechanism for initiating a recovery process by the sending peer is clearly different from the sender-initiated recovery process described and claimed according to her invention. Nonetheless, Applicant has amended the independent claims in a manner intended to further clarify the distinction described herein. As so amended, Applicant believes that the claims are clearly novel over the prior art as described in her application, and accordingly requests withdrawal of the §102 rejection of claims 1-8.

IV. 35 U.S.C. §103 Claim Rejections

Claims 9-13 were rejected under 35 USC §103(a) as being unpatentable over Applicants described prior art in view of Mansfield *et al.* (U.S. Patent No. 6,301,249). As shown in the prior section, the claimed invention here is distinguished from the prior art described by Applicant, and, as with the claims rejected under §102, the independent claims rejected here have been amended in a manner believed to clarify that distinction. Accordingly, the primary reference cited as the basis for this §103 rejection having been shown as not teaching the critical limitations of the independent claims, this rejection basis must fail. Withdrawal of the rejection of claims 9-13 under §103 is accordingly respectfully requested.

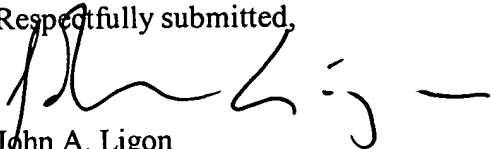
V. Conclusion

Having fully addressed the Examiner's objections and rejections herein, it is believed that, in view of the preceding amendments and remarks, this application now stands in condition for allowance. Such allowance is respectfully requested.

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Please charge any fees due in respect to this amendment to Deposit Account No. 50-1944.

Respectfully submitted,


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I hereby certify that this Response to Office Action is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on May 21, 2004.

By: 

John A. Ligon